

04/25/08



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 10

1200 Sixth Avenue, Suite 900  
Seattle, Washington 98101-3140

April 25, 2008

Reply To: ECL-113

John Hatmaker LS1 629  
Tronox LLC  
P.O. Box 268859  
Oklahoma City, Oklahoma 73126

Dear Mr. Hatmaker:

With this letter I am formally transmitting a signed copy of the Addendum 1 to the Statement of Work of Remedial Design/Remedial Action Consent Decree for Kerr-McGee Superfund Site (Addendum). The work described in the enclosed Addendum represents follow-up actions that were identified in EPA's Five Year Review (FYR) for the site which was completed and signed on September 28, 2007. Your email to me dated April 25, 2008, acknowledging receipt of an electronic version of the Addendum, serves to begin the 30 day period for work plan development and submittal to EPA for review.

This letter also serves to acknowledge receipt of your letter of March 27, 2008 which documents that the detection and reporting limits for arsenic in water samples have been reduced to 0.21 and 5 micrograms per liter ( $\mu\text{g/L}$ ), respectively. That letter satisfies the requirements of Task 3.4 and the Task 4.4 deliverable specified in the Addendum as those limits are both below the current arsenic maximum contaminant level of 10  $\mu\text{g/L}$ .

Please feel free to contact me with any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "William M. Ryan", followed by a horizontal line.

William M. Ryan  
Remedial Project Manager

Enclosure

cc: Boyd Schvaneveldt, Tronox-Soda Springs  
Doug Tanner, IDEQ-Pocatello  
Clyde Cody, IDEQ-Boise

USEPA SF



1340061

**Addendum 1  
to the  
Statement of Work of Remedial Design/Remedial Action Consent Decree for  
Kerr-McGee Superfund Site**

**1. Purpose**

This document sets forth the scope of Work for implementing actions identified in the second Five Year Review (FYR) for the Kerr-McGee Superfund Site completed in September 2007. In that review, EPA identified follow-up actions that need to be completed before a protectiveness determination for the site can be made. Tronox LLC (Tronox) shall submit for EPA review and approval in accordance with and pursuant to the Consent Decree, Civil Action No. CIV97-U0121-E-BLW, entered on August 21, 1997, a Work Plan for conducting the work identified in this Addendum. Tronox shall ensure that all work undertaken is consistent with the National Contingency Plan (NCP) and adheres to the requirements specified in the Consent Decree, this Addendum, the Record of Decision (ROD) for the Site, and the approved work plan, consistent with Superfund Remedial Action guidance and any additional guidance provided by EPA.

Tronox shall perform the work described in this Addendum and the approved Work Plan. EPA shall review the work products and schedules, and conduct oversight of Tronox's activities throughout the performance of the work. Tronox shall assist EPA in conducting oversight activities. This Addendum shall be fully incorporated into and a part of Statement of Work attached to the above-referenced 1997 Consent Decree. It has signature blocks for Tronox and EPA to memorialize the agreement to consensually add these tasks to Tronox's obligations to comply with the Consent Decree.

**2. Background**

EPA completed the second FYR for the Kerr-McGee Superfund Site in September 2007. Evaluation of groundwater monitoring data during the FYR reveal that, after initially decreasing, trends for a number of contaminants of concern (COCs) have been relatively flat since the late 1990s and remain above risk-based cleanup goals identified in the ROD. In some cases, trends for certain COCs at specific monitoring wells have been increasing over the last several years. Because groundwater cleanup goals have not been achieved within the 10 year period predicted in the ROD, and trends for some COCs are flat or upwards at some wells, additional assessment of the remedy in meeting the cleanup goals is needed.

The FYR found that the remedies were constructed in accordance with the requirements of the ROD, however a protectiveness determination of the remedy was not made because levels of COCs in groundwater and surface water remain above cleanup goals and recent trends raise questions about the likelihood of achieving those goals in the

foreseeable future. The FYR identified the following actions to be taken in order to render a protectiveness determination for the site.

1. Evaluate the likelihood of the remedy achieving cleanup goals within a specifiable timeframe;
2. Evaluate adequacy of current groundwater monitoring network for identifying the offsite migration of COCs;
3. Assess whether current groundwater and surface water performance standards are still adequately protective; and
4. Work with the laboratory providing analytical services to reduce the groundwater detection and reporting limits to less than the current Maximum Contaminant Level (MCL) for arsenic.

Actions 1, 2, and 4 above shall be completed by Tronox, EPA will evaluate whether the performance standards for the site are still adequately protective (Action 3).

These actions shall be completed by December 1, 2008 to enable EPA to achieve its current goal of making a protectiveness determination for the site by December 31, 2008.

### **3. Work to be Completed**

The work completed by Tronox shall fully address actions 1, 2, and 4 identified above.

#### **3.1 Develop Work Plan**

A Work Plan shall be developed which describes the approaches, methodologies, information sources and other pertinent information that will be used to complete the following tasks:

1. Evaluate the likelihood of meeting groundwater and surface water performance standards with the currently implemented remedy;
2. Evaluate the adequacy of the current groundwater monitoring network for understanding offsite migration of COCs; and
3. Reduce the detection and reporting limits for arsenic in water samples to a level below the current arsenic MCL of 10 micrograms per liter ( $\mu\text{g/L}$ ).

#### **3.2 Evaluate the Current Remedy**

Tronox shall evaluate the currently implemented remedy as it relates to meeting cleanup performance standards established in the ROD. This evaluation shall include, but not be limited to, the following:

- Determine whether remedy components are still functioning as designed and installed;
- Evaluate geochemical, hydrogeologic and other factors that may be influencing current COC levels in groundwater;
- Assess whether all source areas have been identified and have been adequately addressed with the current remedy;

- Evaluate trends of COCs in groundwater and surface water to determine whether cleanup performance standards can reasonably be expected to be met and, if so, specifically when;
- Assess why site-related COCs are increasing in downgradient springs.

The objective of this evaluation is to determine whether the currently implemented remedy will result in achieving the cleanup standards established for the site.

### 3.3 Evaluate Current Groundwater Monitoring Network

Tronox shall evaluate the effectiveness of the current groundwater monitoring network in defining and understanding the offsite migration of site-related COCs. At a minimum, this evaluation shall assess whether the currently established monitoring wells are adequately located to reveal whether the groundwater plume is attenuating or migrating downgradient. Tronox may also choose to undertake a groundwater monitoring optimization evaluation to determine whether the current monitoring network and program can be revised to provide the information needed in a more efficient and effective manner.

The objective of this effort is to determine whether there is a need to modify/augment the current monitoring network.

### 3.4 Reduce the Detection and Reporting Limits for Arsenic in Water Samples

Tronox shall ensure that laboratory analyses of water samples utilize detection and reporting limits for arsenic below the current arsenic MCL of 10 µg/L.

The objective of this effort is to ensure that analytical results can be compared with the arsenic MCL to determine whether the remedy as implemented to date is adequately protective.

## **4. Delivery Schedules**

A schedule for all deliverables developed under this Addendum is described below and summarized in Table 1.

Settling Defendant may determine that additional data gathering and/or assessment is required to meet the objectives of the work described in Section 3, and may seek additional time to perform these tasks. If, at any time during the conduct of work described in this Addendum, EPA determines that additional data gathering and/or assessment is required to meet the objectives of this evaluation, Settling Defendant may be required to perform these tasks and the schedule in this addendum will be extended. The procedures set forth in the Dispute Resolution Section of the Consent Decree may be invoked if Settling Defendant believes either that some or all of the additional tasks are

unnecessary in whole or in part, or that a greater extension of time to perform these tasks should apply.

#### 4.1 Work Plan

A draft Work Plan shall be submitted to EPA and the State of Idaho Department of Environmental Quality (IDEQ) for review and comment within 30 calendar days after Tronox receipt of the final version of this Addendum. A final Work Plan which addresses comments and any revisions specified by EPA shall be submitted for EPA approval within 14 calendar days of receipt by Tronox of such comments and revisions, or such longer period as may be specified by EPA.

#### 4.2 Evaluation of Current Remedy

A draft report documenting the findings of the evaluation of the current remedy as it relates to meeting cleanup performance standards established in the ROD shall be submitted for EPA and IDEQ review by October 1, 2008. A final report which addresses comments and any revisions specified by EPA shall be submitted to EPA and IDEQ by December 1, 2008.

#### 4.3 Evaluation of Groundwater Monitoring Network

A draft report documenting the findings of the evaluation of the current groundwater monitoring network shall be submitted for EPA and IDEQ for review and comment by August 1, 2008. A final report which addresses comments and any revisions specified by EPA shall be submitted to EPA and IDEQ by September 30, 2008.

#### 4.4 Reduce the Detection and Reporting Limits for Arsenic in Water Samples

A letter from Tronox documenting that laboratory analyses of water samples will utilize detection and reporting limits for arsenic below the current arsenic MCL of 10 µg/L shall be submitted to EPA by March 30, 2008.

#### 4.5 Monthly Progress Report

Progress on the work performed under this Addendum shall be summarized in the monthly progress report currently prepared by Tronox.

Table 1. Work Product Delivery Schedule.

Work Product	Delivery Date
Work Plan <ul style="list-style-type: none"> <li>• Draft</li> <li>• Final</li> </ul>	30 calendar days after receipt of Addendum 14 calendar days after receipt of comments
Evaluation of Remedy <ul style="list-style-type: none"> <li>• Draft Report</li> <li>• Final Report</li> </ul>	October 1, 2008* December 1, 2008*
Evaluation of Monitoring Network <ul style="list-style-type: none"> <li>• Draft Report</li> <li>• Final Report</li> </ul>	August 1, 2008* September 30, 2008*
Reduce Arsenic Detection Limit <ul style="list-style-type: none"> <li>• Documentation of detection limit change</li> </ul>	March 30, 2008
Progress Report	Monthly

\* These dates may be changed pursuant to the provisions of Section 4 of this Addendum to the Statement of Work of Remedial Design/Remedial Action Consent Decree for Kerr-McGee Superfund Site.

It is hereby agreed:

For EPA:

*Daniel D. Opalski*  
Daniel D. Opalski, Region X Director  
Office of Environmental Cleanup

*4/23/08*  
Date

For Tronox LLC:

*John Hatmaker*  
John Hatmaker  
Director-Environment, Health and Safety

*15 APRIL 2008*  
Date